

## Outdoor Events

Non-severe thunderstorms can be deadly. From 2006 to 2013 a total of 261 people were struck and killed by lightning. There is no true safe place outdoors when a thunderstorm is nearby. Lightning often and can strike 10 miles away from a base of storm.

Monitoring the weather and using lightning detection tools is key to safety.



Heat during late summer and early fall can create dangerous and life threatening conditions. When temperatures or heat indices rise above 100 °F students should be kept out of the sun and strenuous activities should be rescheduled for cooler conditions.

Heat Index  
Temperature (°F)

	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution Extreme Caution Danger Extreme Danger

## Flash Flooding



The deadliest form of severe weather produced by thunderstorms is flash flooding. Flash flooding creates the most fatalities associated with thunderstorms each year.

Running water often looks harmless, but it is so powerful that it only takes 6 inches of moving water to knock you off your feet. Respect the power of water; it only takes **2 feet** of moving water to sweep a school bus out of control.

You need to create alternative routes or a contingency plan to return to school if flood-waters are encountered.

## For More Information:

[weather.gov/bgm](http://weather.gov/bgm)

[www.ready.gov](http://www.ready.gov)

[www.floodsmart.gov](http://www.floodsmart.gov)

<http://www.nws.noaa.gov/com/weatherreadynation/>

<http://www.nws.noaa.gov/os/severeweather/>

<http://www.floodsafety.noaa.gov/>

<http://www.nws.noaa.gov/os/heat/>

<http://www.spc.noaa.gov/>

<http://www.cpc.ncep.noaa.gov/>



NOAA's National Weather Service  
Binghamton, NY

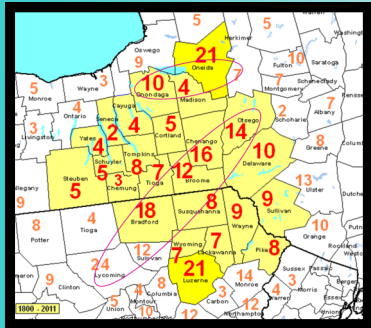


## A Guide To Developing A Severe Weather Emergency Plan For Schools



NOAA's National Weather Service  
Binghamton, NY  
32 Dawes Dr. Johnson City, NY 13790  
(607) 729-1597

## Dangerous Weather Happens Right Here!



All tornadoes recorded from 1800-2011



Thunderstorms, tornadoes, lightning, extreme heat and flash floods wreak havoc across the states of Pennsylvania and New York each year. Every year across the United States, lightning causes an average of 55-60 fatalities and 400 injuries. Tornadoes cause an average of 60-65 fatalities and 1,500 injuries each year. Tornadoes can become larger than a mile wide and generate winds of 200+ mph. Thunderstorms can produce straight-line winds that exceed 125 mph and drop hail as large as softballs.

Heat can also be dangerous and can tax the body beyond its ability. When a body exceeds the level of heat it can handle, the temperature of the body's inner core begins to rise and heat-related illness may develop.

While one can not prevent severe weather from striking, we can mitigate fatalities and injuries. We can achieve this by being prepared and having a plan before severe weather strikes.

## Severe Weather Emergency Plan

Knowledge of where to find current weather conditions and staying aware of on-going weather, combined with a severe weather emergency plan is key to saving lives and mitigating disasters when severe weather strikes. The best way to prevent major disasters from happening is to prepare. The way to prepare is to have an emergency plan.

### Develop an Emergency Plan

#### Step 1: Pick an Emergency Coordination Team

- ◆ Involve Staff members

-Decide who participates on the team. Consider a broad selection of teachers, coaches and aids.

#### Step 2: Define Responsibilities

- ◆ Select a team who monitors the weather
- ◆ Select a member of your team to monitor lightning
- ◆ Select a person who triggers the emergency plan into action
- ◆ Select a person who contacts emergency officials if structural damage occurs.

#### Step 3: Develop Severe Weather Emergency Plan

- (A) Ensure ways to receive emergency weather information
- ◆ NOAA Weather radio, Weather Channel, local TV stations, radio, apps on smart phones

- (B) Develop strategies on how to disseminate critical information within 60 seconds.

PA systems, electronic messenger, text messages, secondary disseminations if you rely on electricity (make sure you make special provisions for staff and students with disabilities)

- (C) Know when to activate your emergency plan

- (D) Find proper "safety zones" for each classroom, gymnasium and cafeteria

After composing a plan, make sure you include a wide variety of scenarios for all students and staff. Make sure you include what to do when students are at lunch, and or arriving or leaving school, and all extracurricular activities.

## Safety Zones

Finding a proper safety zone for all staff and students can be a difficult and daunting task. Schools are sufficiently complex and every building is designed and structured differently.

When choosing a "safety zone" you must consider how a location will react to high winds from (a) roof failure (b) breaking glass (c) flying debris.

The NWS suggests every school have a licensed engineer or architect inspect all buildings to designate safe shelter areas. Basements should be used first since they offer best protection. If no basements are available, schools should use interior rooms and hallways on the lowest floor, away from windows.

Once a place has been designated as a "safety zone", ensure students and staff members know how to reach the designated areas within 60 seconds, and know the proper position to protect themselves.

